What is Claimed:

1. A hot melt conductor paste composition comprising from about 50% to about 90% by weight of conductive particles consisting essentially of either silver or aluminum and up to about 50% by weight of glass particles dispersed in a thermoplastic polymer system that is a solid at 25°C and melts at a temperature within the range of from about 35°C to about 90°C.

2. The hot melt conductor paste composition according to claim 1 further comprising at least 0.01% by weight of one or more C_{12} or higher saturated fatty acids.

3. The hot melt conductor paste composition according to claim 1 wherein said glass particles comprise at least one glass frit comprising by weight from about 60% to about 95% PbO, up to about 30% SiO_2, up to about 15% B_2O_3, up to about 10% Al_2O_3, up to about 10% ZrO_2, up to about 5% P_2O_5, and up to about 5% RuO_2.

4. The hot melt conductor paste composition according to claim 1 wherein said conductive particles have a bi-modal particle size distribution.

5. The hot melt conductor paste composition according to claim 1 wherein a majority portion of said conductive particles comprise flakes having a D_{50} of less than about 5.0 μm.

6. The hot melt conductor paste composition according to claim 3 wherein said glass frit comprises by weight from about 75% to about 92% PbO, from about 10% to about 20% SiO_2, up to about 7% B_2O_3, up to about 5% Al_2O_3, up to about 6% ZrO_2, up to about 3% P_2O_5, and up to about 3% RuO_2.

7. The hot melt conductor paste composition according to claim 1 wherein said thermoplastic polymer system comprises at least one C_{14} or higher linear primary alcohol.

8. The hot melt conductor paste composition according to claim 7 wherein said thermoplastic polymer system comprises a blend of two or more different C_{14} to C_{20} linear primary alcohols.

9. The hot melt conductor paste composition according to claim 7 wherein said thermoplastic polymer system further comprises one or more cellulose ethers.

10. The hot melt conductor paste composition according to claim 9 wherein said cellulose ether comprises ethyl cellulose.

11. The hot melt conductor paste composition according to claim 2 wherein said C_{12} or higher saturated fatty acid comprises isostearic acid.

12. The hot melt conductor paste composition according to claim 1 wherein said conductive particles comprise a blend of a majority portion by weight of silver flakes having a D_{50} of less than 2.5 μm and minority portion by weight of flakes having a D_{50} of greater than about 2.5 μm, wherein said glass particles comprise a glass frit comprising by weight from about 75% to about 92% PbO, from about 10% to about 20% SiO_2, up to about 7% B_2O_3, up to about 5% Al_2O_3, up to about 6% ZrO_2, up to about 3% P_2O_5, and up to about 3% RuO_2, and wherein said thermoplastic polymer system comprises a blend of two or more different C_{16} to C_{18} linear primary alcohols and ethyl cellulose.

13. The hot melt conductor paste composition according to claim 12 further comprising at least about 0.1% by weight of one or more C_{12} or higher saturated fatty acids.

14. The hot melt conductor paste composition according to claim 1 wherein said conductive particles comprise aluminum flakes having a D_{50} of less than about 5.5 μm, wherein said glass particles comprise silica, and wherein said thermoplastic polymer system comprises a blend of at least one C_{16} or higher linear primary alcohol and ethyl cellulose.

15. The hot melt conductor paste composition according to claim 14 further comprising at least about 0.1% by weight of one or more C_{12} or higher saturated fatty acids.

16. A method of forming a conductive pattern on a photovoltaic cell comprising:

providing a hot melt conductor paste composition comprising from about 50% to about 90% by weight of conductive particles consisting essentially of

either silver or aluminum and up to about 50% by weight of glass particles dispersed in a thermoplastic polymer system that is a solid at 25°C and melts at a temperature within the range of from about 35°C to about 90°C;

heating said hot melt conductor paste composition to a temperature above the melting point of the thermoplastic polymer system but below the temperature at which said thermoplastic polymer system begins to substantially volatilize;

applying said hot melt conductor paste composition to a silicon substrate by screen printing, pad printing, extrusion, or dispensing; and

firing said substrate to completely burn out all organic material is said hot melt conductor paste composition and form said conductive pattern.

17. The method according to claim 16 wherein said hot melt conductor paste is applied by screen printing to said substrate using a screen having a mesh size within the range of from 100 mesh to about 400 mesh.

18. The method according to claim 16 wherein said firing temperature is within the range of from about 650°C to about 900°C.

19. The method according to claim 16 wherein said conductive particles comprise a blend of a majority portion by weight of silver flakes having a D_{50} of less than 2.5 μm and minority portion by weight of flakes having a D_{50} of greater than about 2.5 μm, wherein said glass particles comprise a glass frit comprising by weight from about 75% to about 92% PbO, from about 10% to about 20% SiO_2, up to about 7% B_2O_3, up to about 5% Al_2O_3, up to about 6% ZrO_2, up to about 3% P_2O_5, and up to about 3% RuO_2, and wherein said thermoplastic polymer system comprises a blend of two or more different C_{16} to C_{18} linear primary alcohols and ethyl cellulose, and wherein said composition further comprises at least about 0.01% by weight of one or more C_{12} or higher saturated fatty acids.

20. The method according to claim 16 wherein said conductive particles comprise aluminum flakes having a D_{50} of less than about 5.5 μm, wherein said glass particles comprise silica, and wherein said thermoplastic polymer system comprises a blend of at least one C_{16} or higher linear primary alcohol and ethyl cellulose, and wherein said composition further comprises at least about 0.01% by weight of one or more C_{12} or higher saturated fatty acids.